

FIGURE 5-8
POWER & REVERB AMPLIFIER
BOARD 124-000176,
LAYOUT & SCHEMATIC

POWER & REVERBERATION AMPLIFIER BOARD (124-000176)

PIN #	WIRE COLOR	TERMINATION			
1	Black	Pin #6 of Left Hand 10 Pin Terminal Strip Top of Power Supply	17	White/Orange	C615 +25V. D.C.
2	Orange	Pin #3 of Left Hand 10 Pin Terminal Strip Top of Power Supply	18	Yellow	T601
3	Shield		19	Green	Terminal #8 on 8 Pin Terminal Strip on Board near Generator
4	Clear	Blue Plug Output from Reverb Spring Unit.	20	Black	Terminal #6 on 8 Pin Terminal Strip on Board near Generator
5	Shield	Cut Off	21	Black	To Chassis Ground Line
6	Clear	"J" Cable Reverb II Switch Open	22	White/Blue	Under Side of Power Emitter of Q605
		End 100K Resistor.	23	White/Black	Collector of Q605
7	Shield		24	N/C	
8	Clear	"K" Cable at Junction of 15 K & 5.6K Resistor between Reverb II & Volume Soft tabs.	25	White/Red	Emitter of Q606
			26	White/Green	Collector of Q606
			27	Shield	N/C
9	Shield		28	Clear	Red Plug to Reverb Spring Input
10	Clear	To Swell Pedal	29	Shield	
11	Shield		30	Clear	"G" Cable Components & Switch Board #6
12	Clear	"H" Cable at Junction 2200 pf, 68K, 27K between Vibrato on Upper & Reverb I tabs.			between Vibrato on Upper & Reverb I tabs. Junction of 2200 pf & 15K.
13	Blue	T601			
14	Red	T601	31	Clear	To Expression Pedal.
15	Black	T601		Shield	Cut Off
16	Violet	C615 -25V. D.C.			

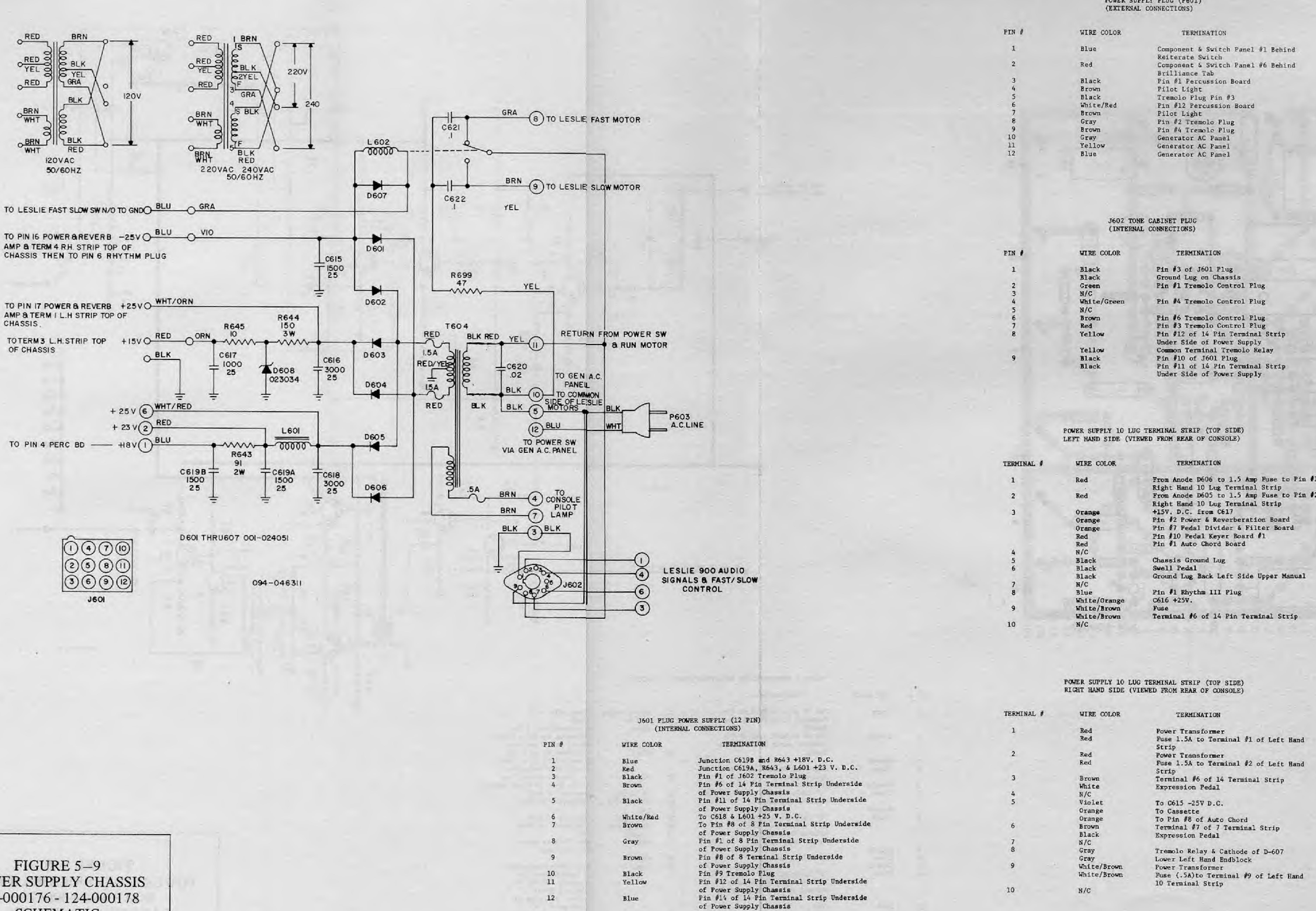


FIGURE 5-9
POWER SUPPLY CHASSIS
124-000176 - 124-000178
SCHEMATIC

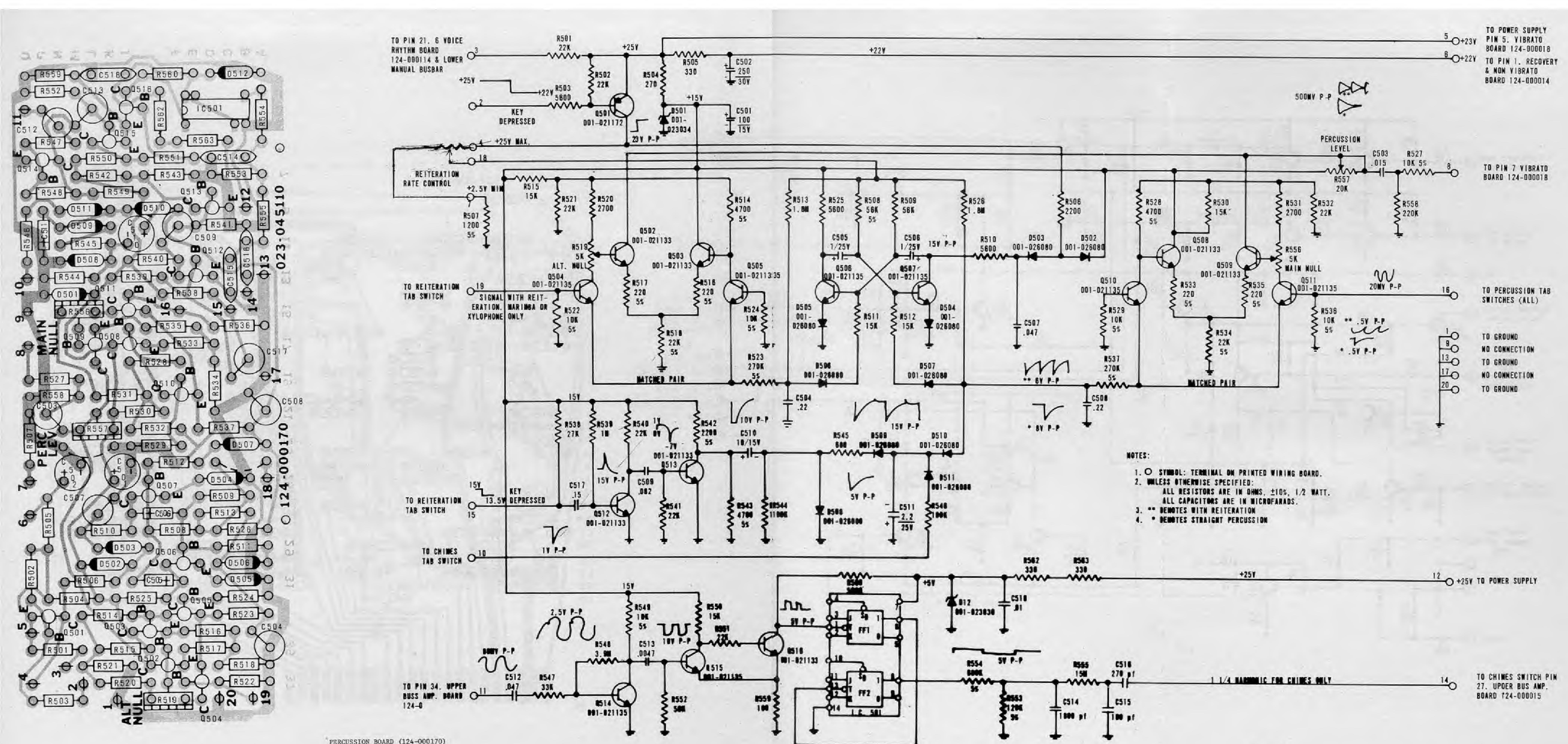
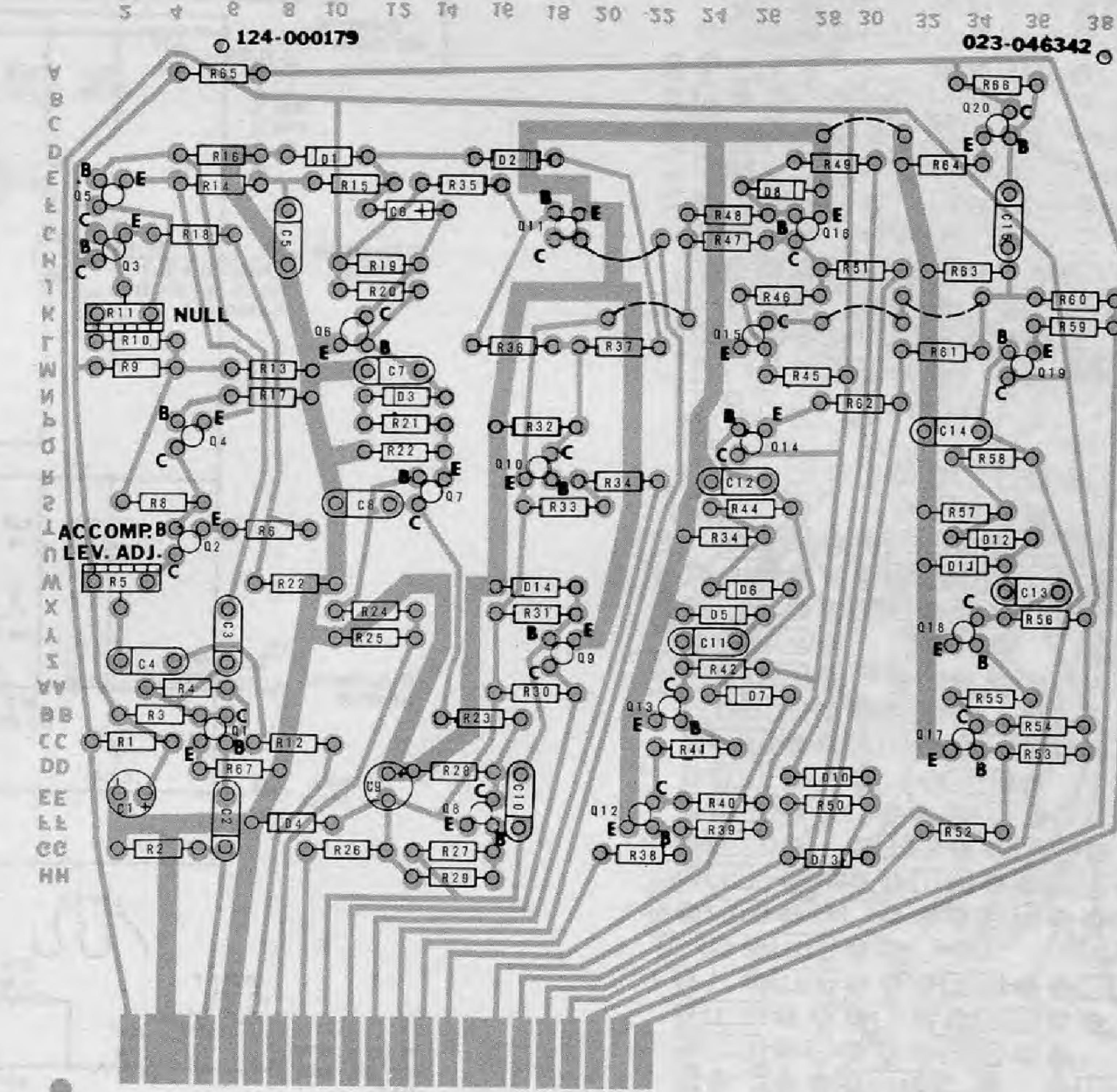
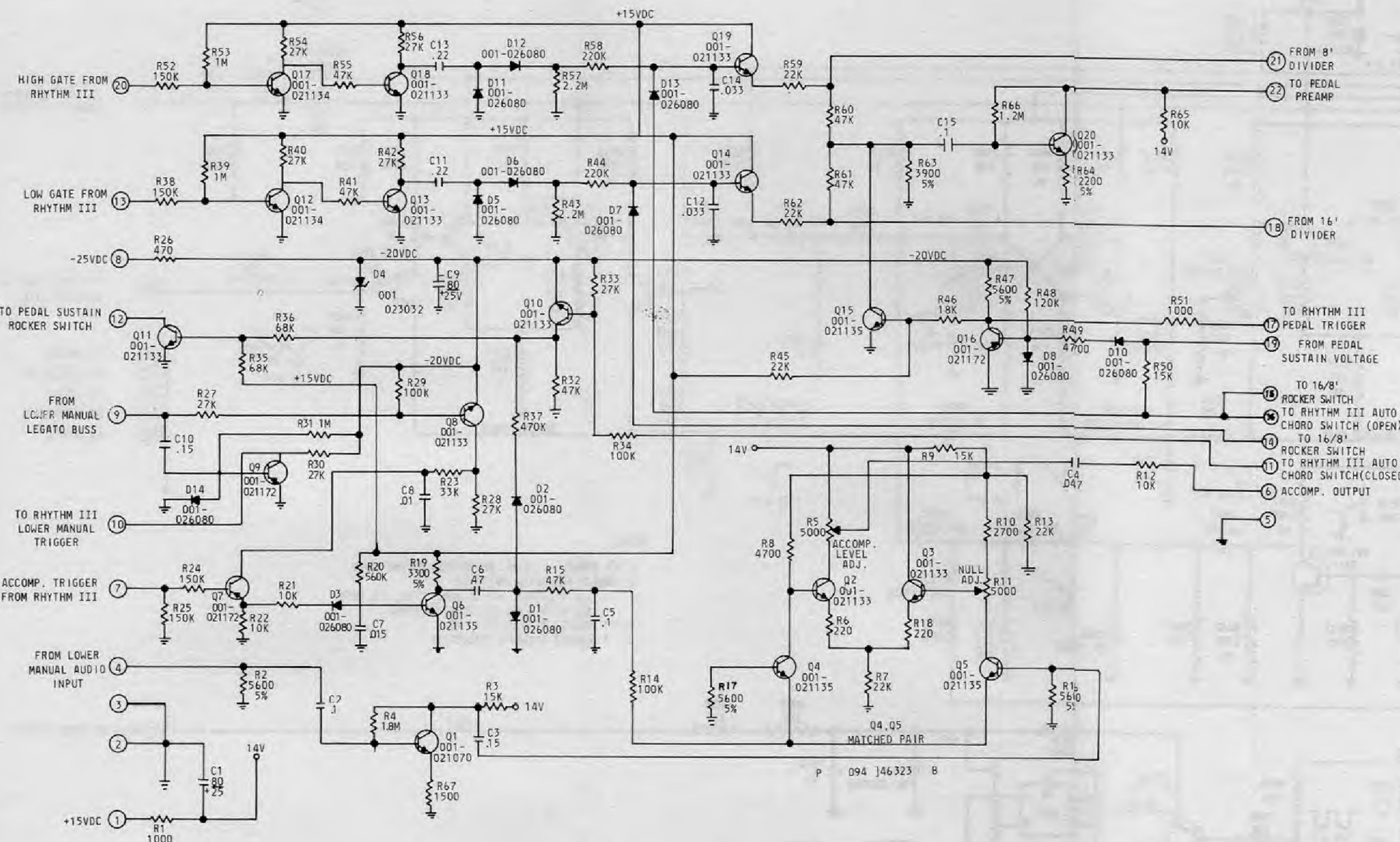


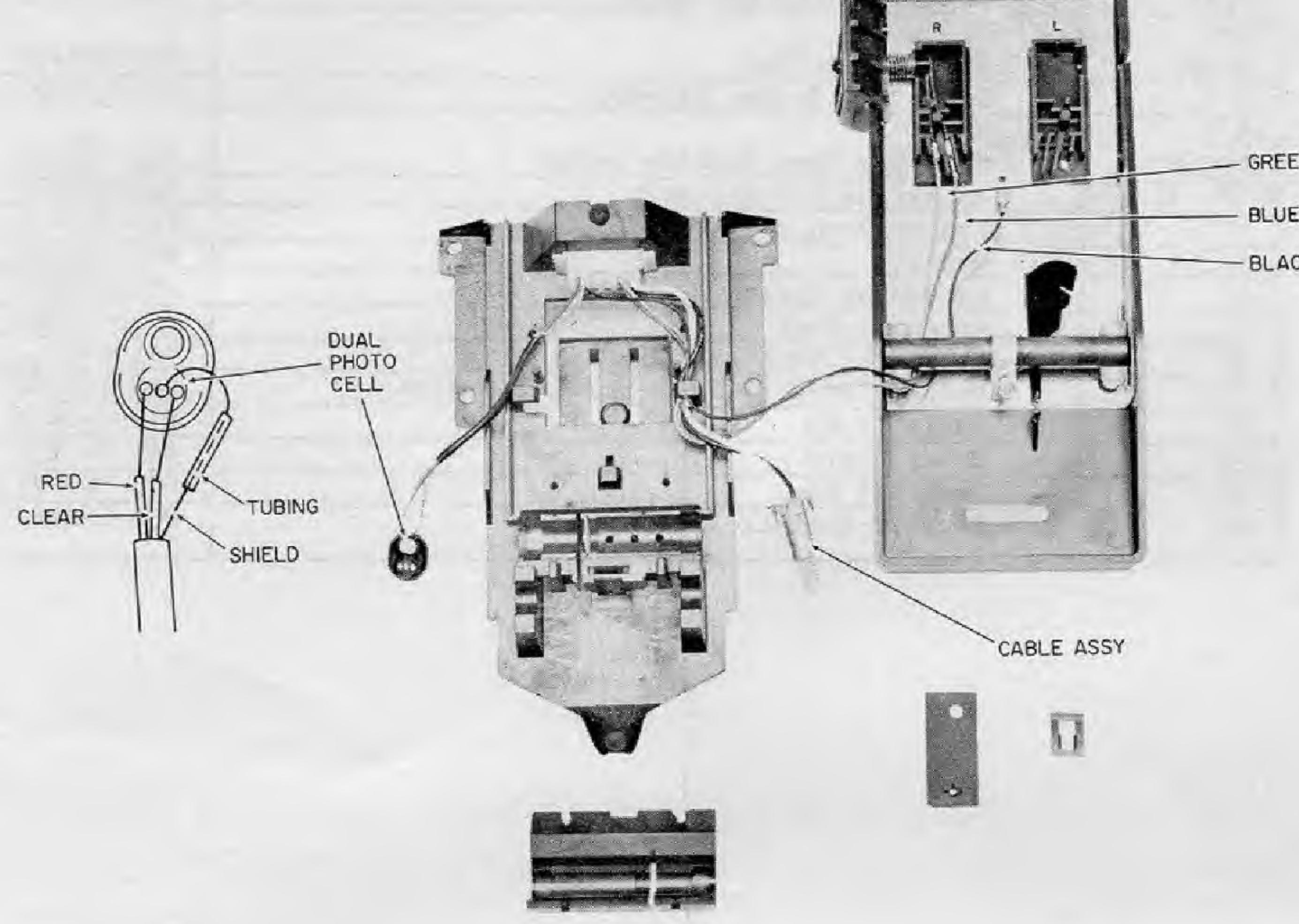
FIGURE 5-10
PERCUSSION BOARD 124-000170,
LAYOUT & SCHEMATIC



AUTO CHORD BOARD (124-000179)

PIN #	WIRE COLOR	TERMINATION	PIN #	WIRE COLOR	TERMINATION
1	Red	Pin #4 left hand 10 lug terminal strip top of power supply chassis +15 V.D.C.	11	Blue	Pin #4, P5 Rhythm Plug
2	Black	Ground lug back of Upper Manual	12	White/Blue	Lower Manual left hand endblock, pedal 16/8' rocker tab.
3	N/C	Cable "A" Switch Panel & Components Board #1 Contact of Lower Manual Ensemble Tab	13	Gray	Pin #8, P5 Rhythm Plug
4	Clear	Switch Shield	14	White	Lower Manual left hand endblock, pedal 16/8' rocker tab.
5	Shield	Lower Manual Ensemble 8 Switch Contact Cut Off	15	White/Black	Lower Manual left hand endblock, pedal 16/8' rocker tab.
6	Clear	Cable "E" Switch Panel & Components Board #1 junction shield cable & 4.7 K	16	White/Black	Pin #5, J5 Rhythm Plug
7	Yellow	Pin #10, P5 Rhythm Plug	17	White/Brown	Pin #7, J5 Rhythm Plug
8	Orange	Pin #6 right hand 10 lug terminal strip top of power supply chassis.	18	White/Red	Pin #11, Pedal Filter & Divider Board
9	Brown	Lower Manual Brush Keying Bus	19	White/Violet	Pedal Keyer Board #1 Pin #8
10	Green	Pin #6, P5 Rhythm Plug	20	White/Orange	Pin #9, J5 Rhythm Plug
			21	White/Yellow	Pin #12 Pedal Filter & Divider Board
			22	Clear	Pin #2 Pedal Filter & Divider Board
				Shield	Pin #6 Pedal Filter & Divider Board

FIGURE 5-11
AUTO CHORD
BOARD 124-000179,
LAYOUT & SCHEMATIC



EXPRESSION PEDAL (123-000061)
INTERNAL CONNECTIONS

PIN #	WIRE COLOR	TERMINATION
1	Red	Dual Photo Cell Cable
2	Bare	
3	Clear	
4	N/C	
5	N/C	
6	N/C	
7	N/C	
8	N/C	
9	N/C	
10	Green	
11	Blue	Foot Switch Right Side
12	N/C	
13	N/C	
14	Black	Expression Pedal Lamp
15	Black	

EXPRESSION PEDAL (123-000061)
EXTERNAL CONNECTIONS

PIN #	WIRE COLOR	TERMINATION
1	Clear - Cable	Pin #10 Power & Reverb Amplifier Board
2	Shield	Common for Pins 1 & 3
3	Clear - Cable	Pin #31 Power & Reverb Amplifier Board
4	N/C	
5	N/C	
6	N/C	
7	N/C	
8	N/C	
9	N/C	
10	Brown	Pin #3 Plug J5 Rhythm III
11	Black	Pin #7 Left Hand 10 Lug Terminal Strip Top of Power Supply Chassis
12	N/C	
13	N/C	
14	White	Pin #3 of Right Hand 10 Lug Terminal Strip Top of Power Supply Chassis
15	Black	Pin #6 of Right Hand 10 Lug Terminal Strip Top of Power Supply Chassis

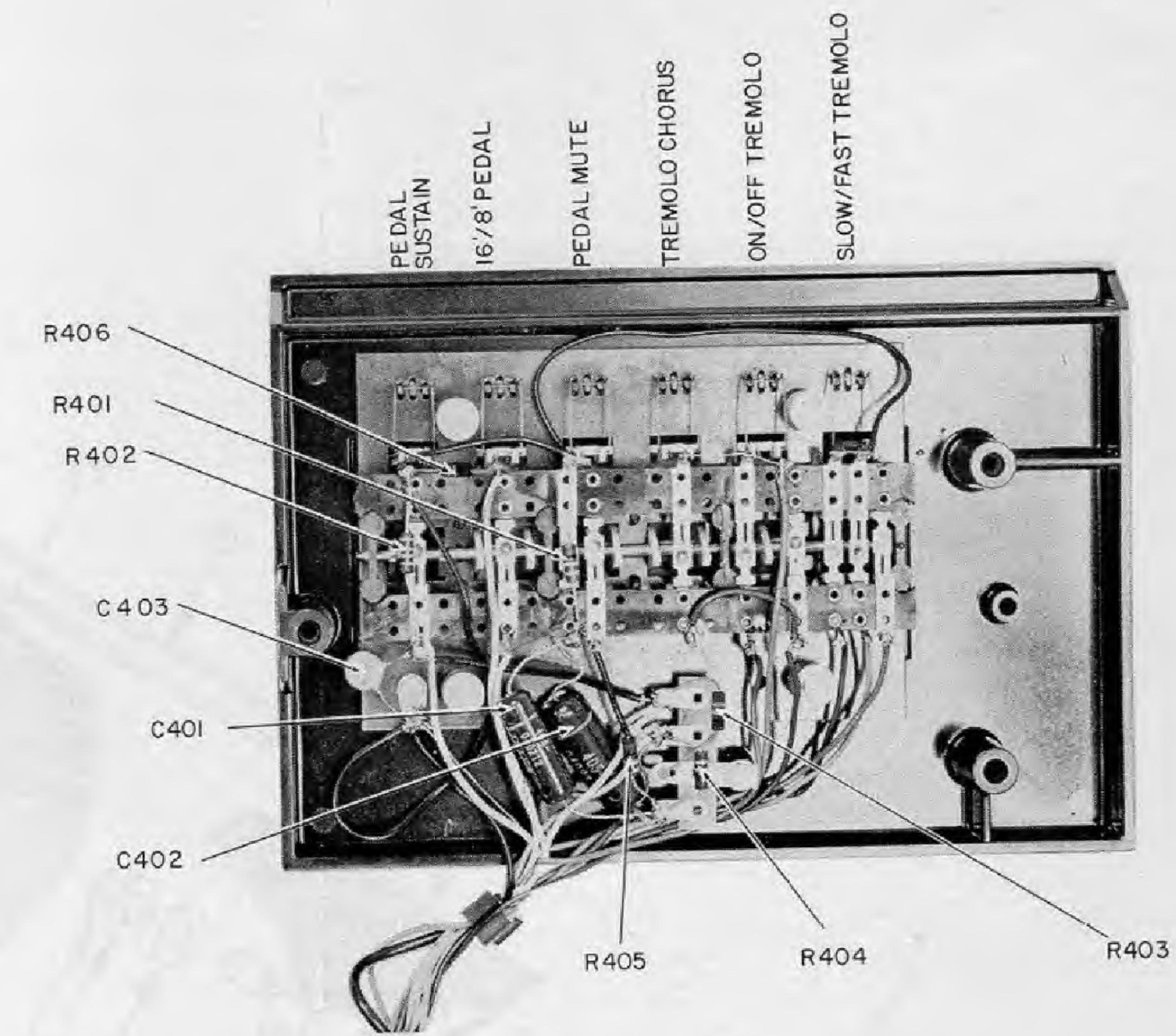


FIGURE 5-12
SPECIAL EFFECTS END BLOCK
125-000073, LAYOUT

FIGURE 5-13
EXPRESSION PEDAL
123-000061, LAYOUT

Item No.	Part Name	Part No.
1,2 27,28	Pan Head Thread Cutting Screw	907-030314
3	Cover Plate	041-042236
4,22	Brush and Lug Assembly	060-042609
5,6 21,24	#8 Keps Hex Nut	999-001264
7	Drive and Endcap Assembly	060-042601
8,9 18,19	Sems Hex Head Machine Screw	831-020314
10	Rotor and Pin Assembly	060-042597
11	Spacer Washer (Phenolic)	999-044671
12,13	Washer	999-044395
14	Grounding Spring	012-043907
15,17	Mounting Post	044-042865
16	Segmented Scanner Tube	045-042112
20	Endcap and Bearing Assembly (Stationary)	060-047300
23	Cable Clamp	013-042866
25	Cover Plate	041-042237
26	Terminal Lug	007-002974
29	Snap-On Contact (16-Used)	030-042583

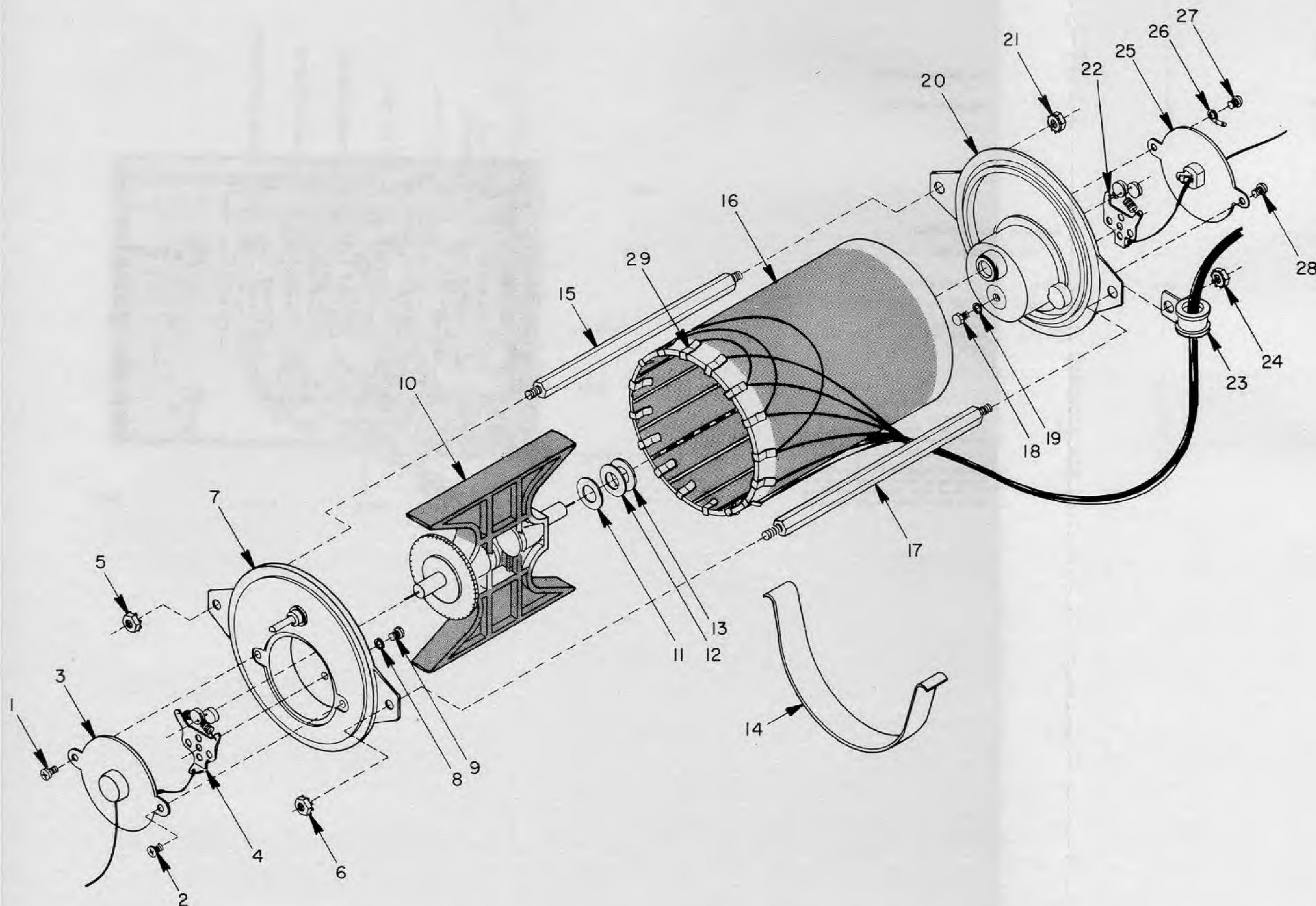
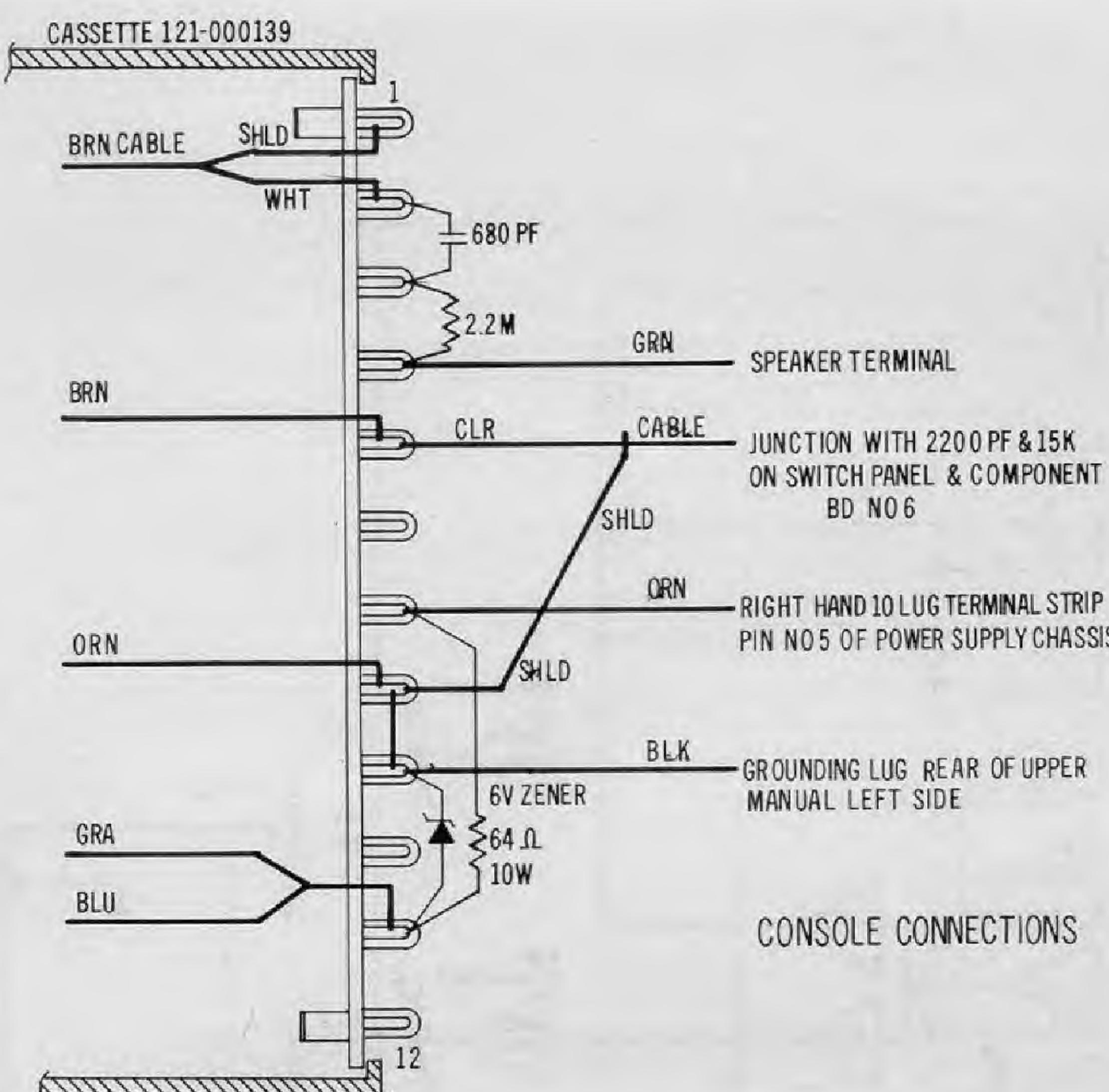
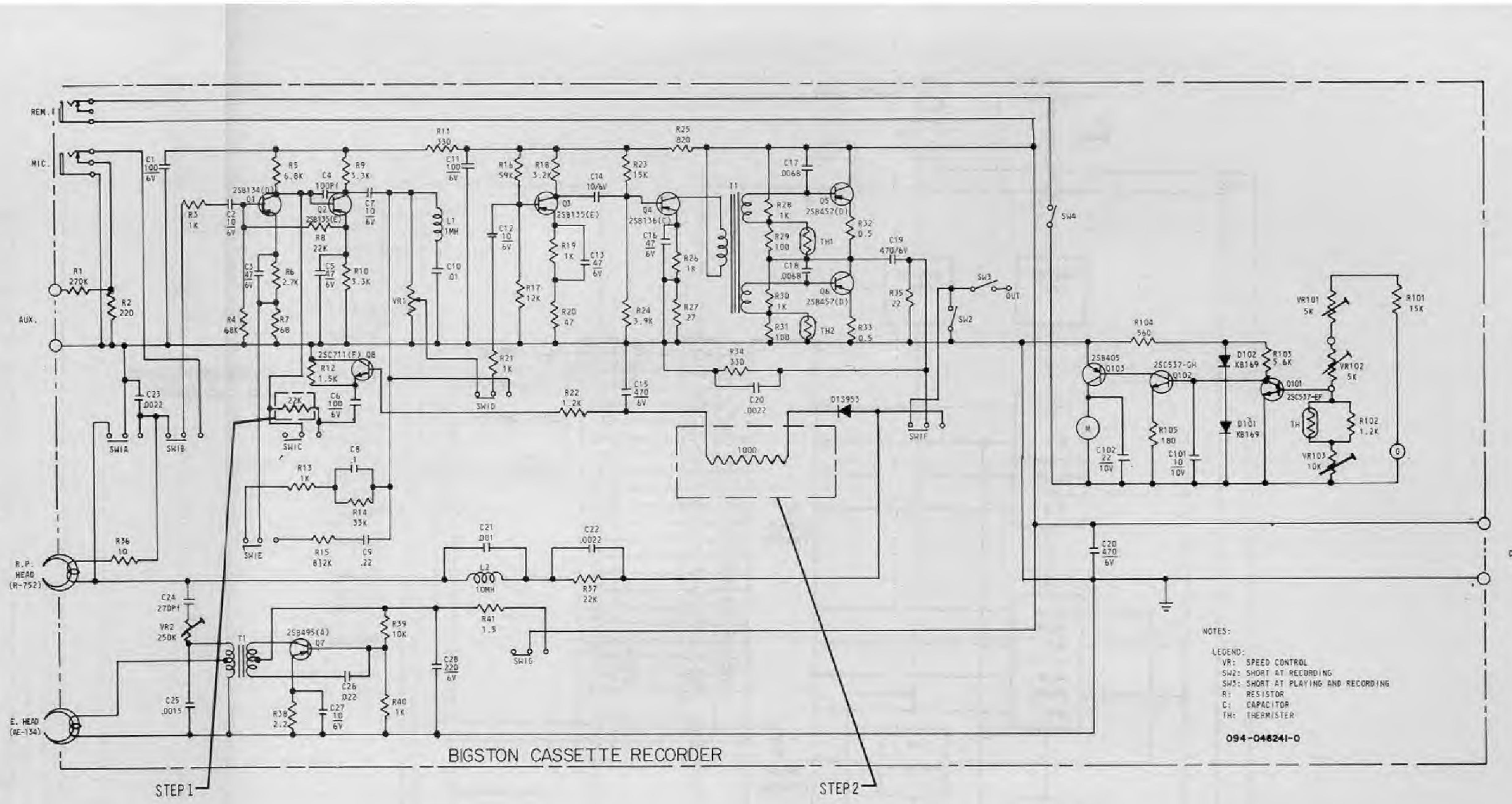


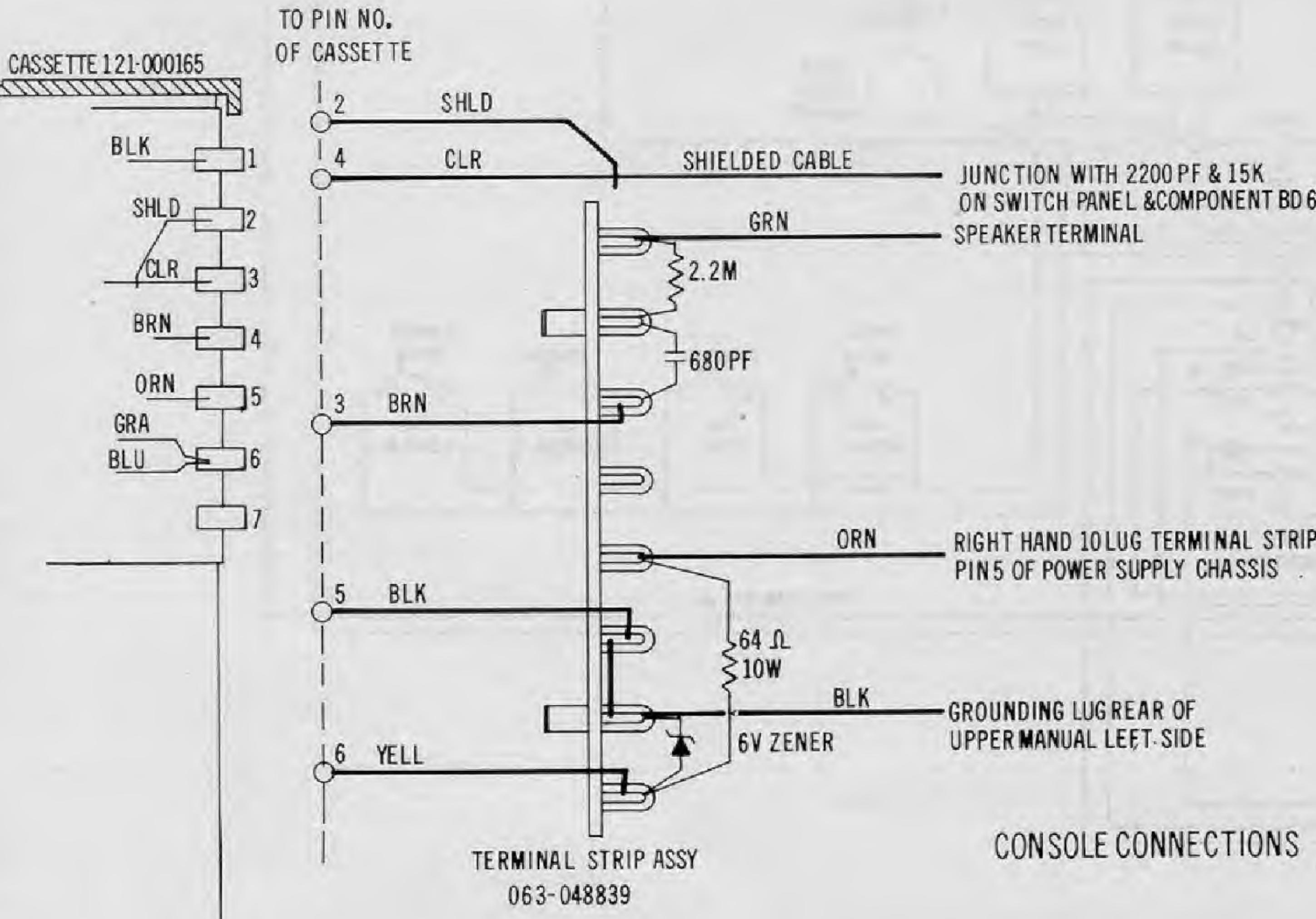
FIGURE 5-14
DRUM SCANNER
066-042874



CONSOLE CONNECTIONS



CASSETTE RECORDER VOLUME FLUCTUATIONS



CONSOLE CONNECTION

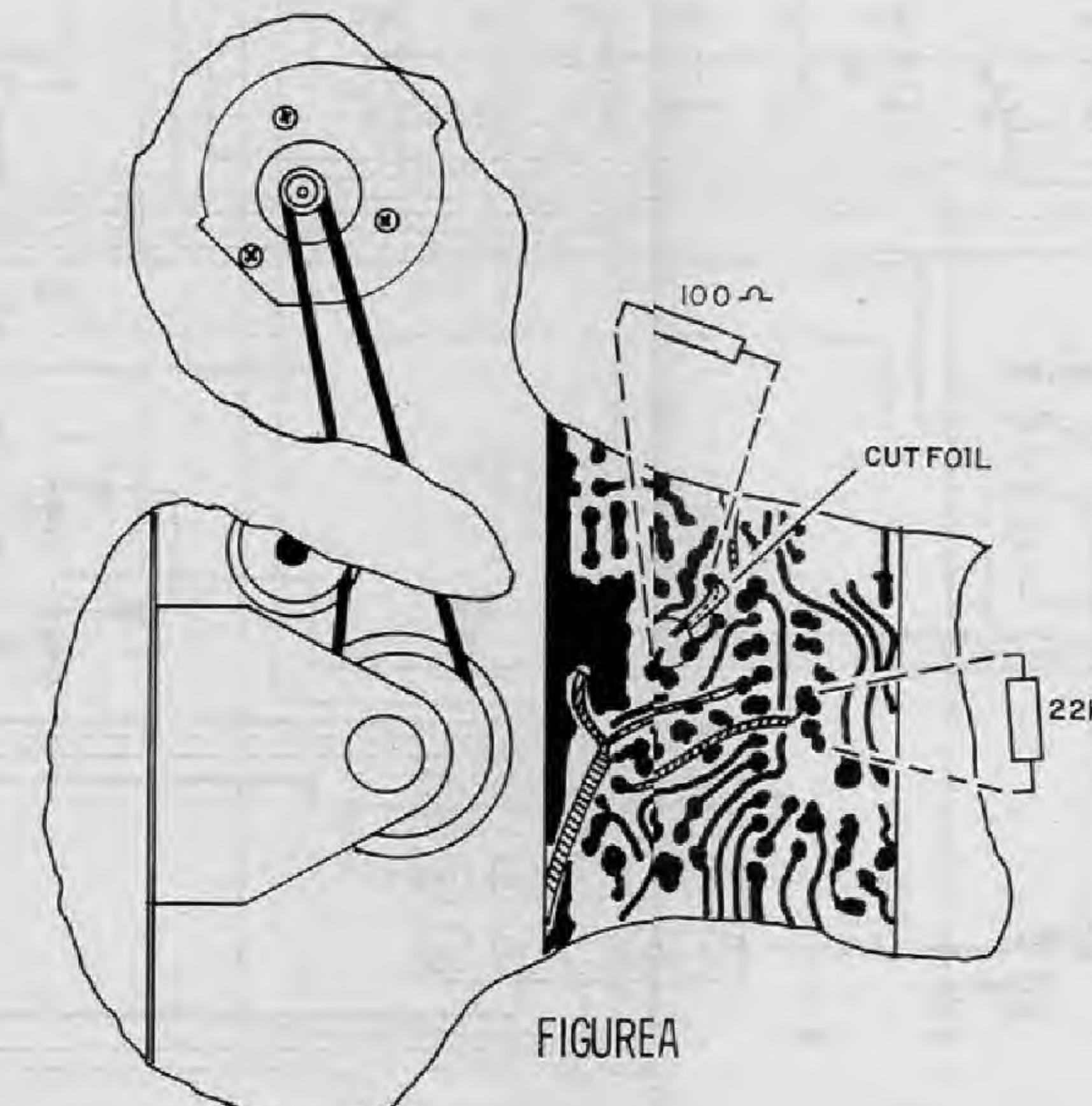


FIGURE A

In order to correct the volume level changes which take place when recording directly from these models, we suggest making the following changes.

Refer to Figure A and Cassette Schematic.

1. Add 22K (1/2 or 1/4 watt) resistor across record terminals (one end on C6) of SW-1C to keep C6 polarized.
 2. Add 100 ohm (1/2 or 1/4 watt) resistor in series with diode D1 (one end of C15) to prevent overcharging of C15 on beginning of large signals.
 3. Operate each unit for 5 minutes in the record mode.
 4. Test cassette by recording a high level signal for a period of one minute.

NOTE

If Large amplitude of level changes are observed, replace C6 or return cassette unit to factory for replacement.

FIGURE 5-15
CASSETTE RECORDER ASSEMBLY
121-000139 & 121-000165,
LAYOUT & SCHEMATIC

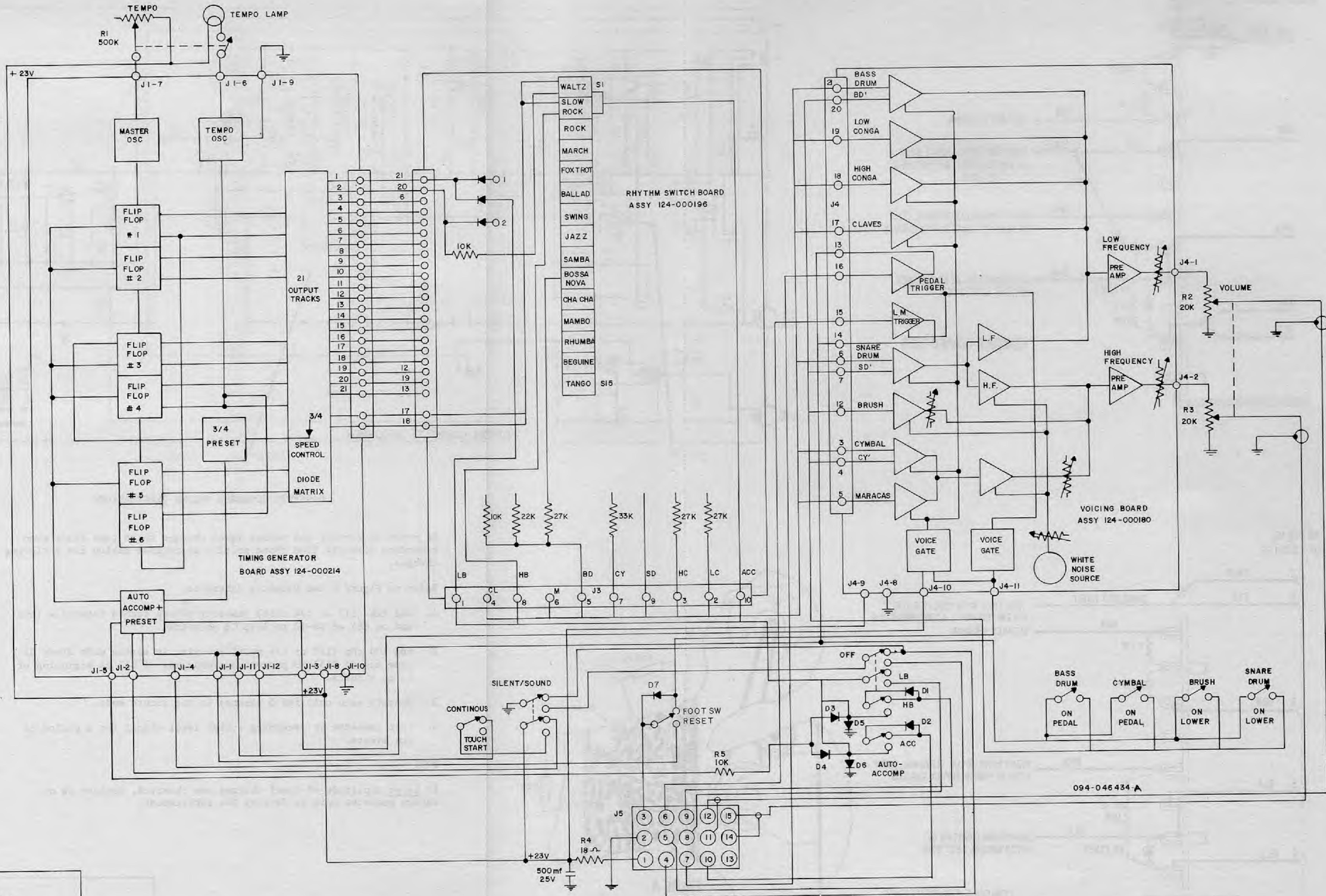


FIGURE 5-16
RHYTHM III
BLOCK LOGIC DIAGRAM
125-000082

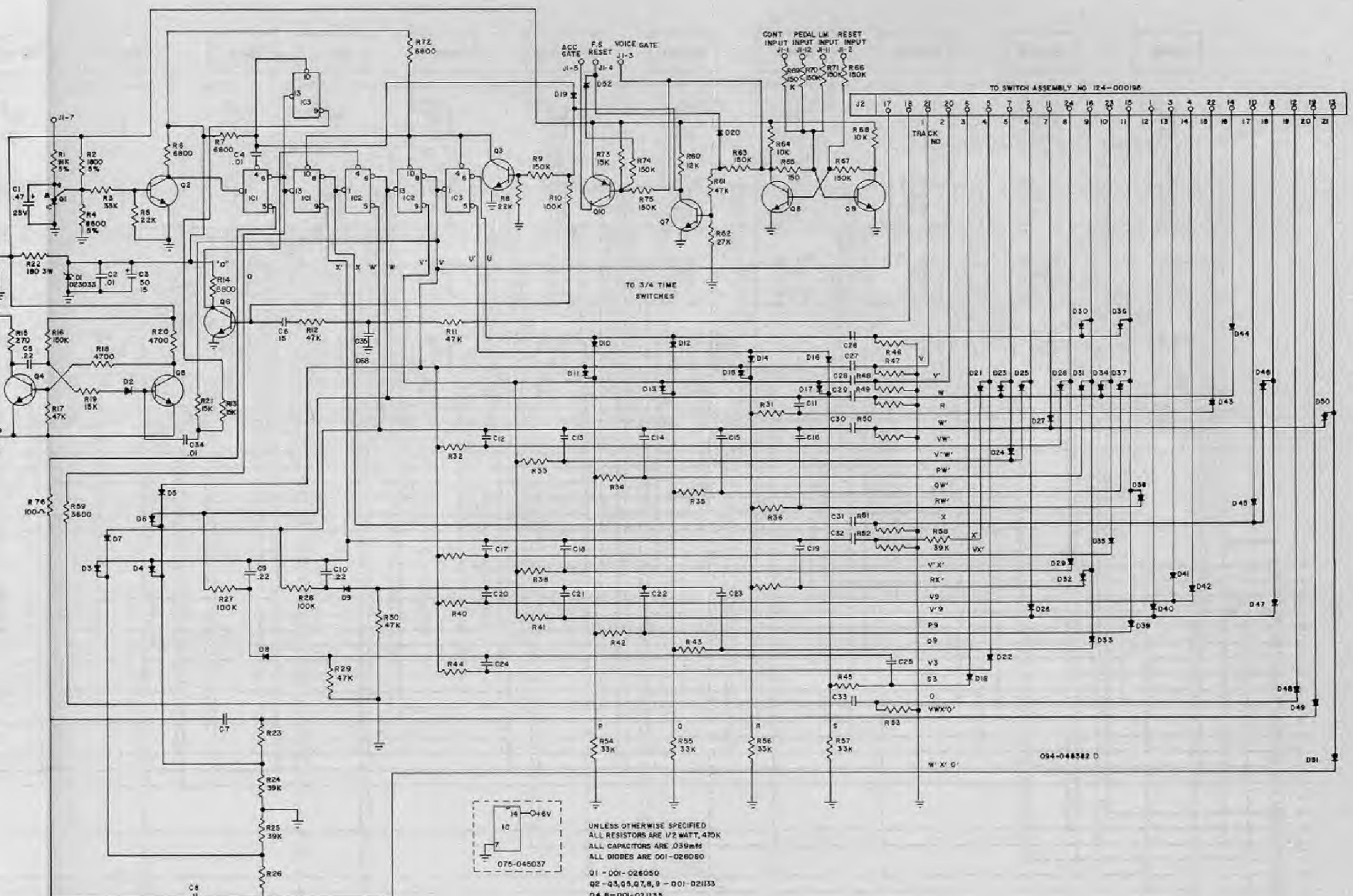
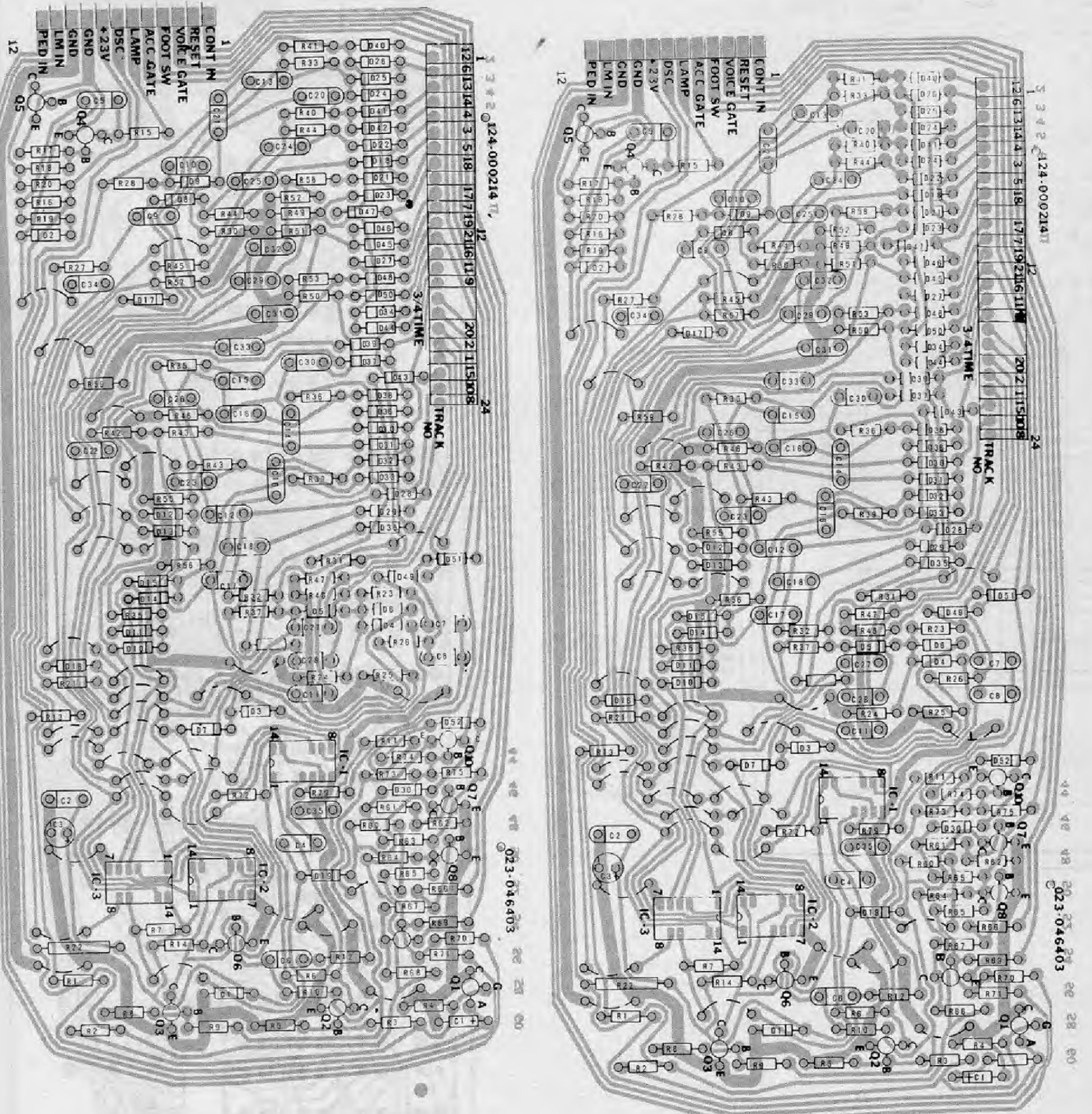


FIGURE 5-17
RHYTHM III GENERATOR & TRACK GATE
BOARD 124-000214,
LAYOUT & SCHEMATIC

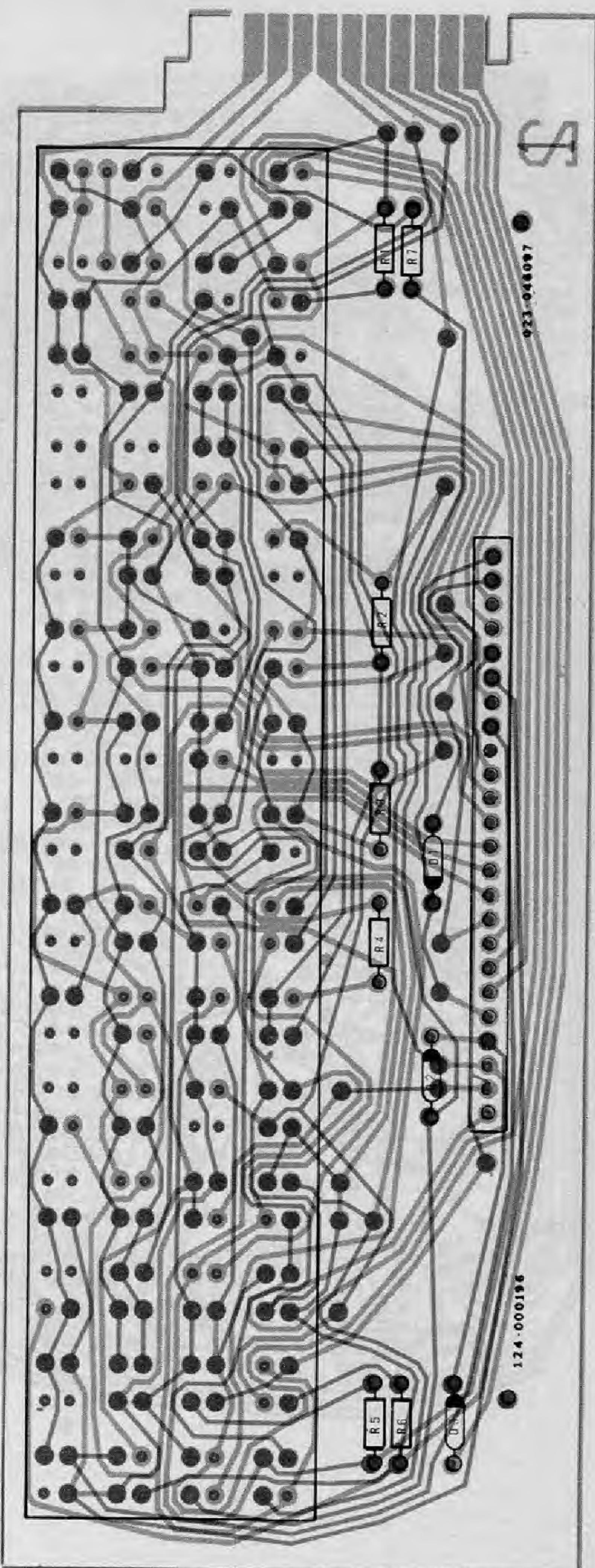
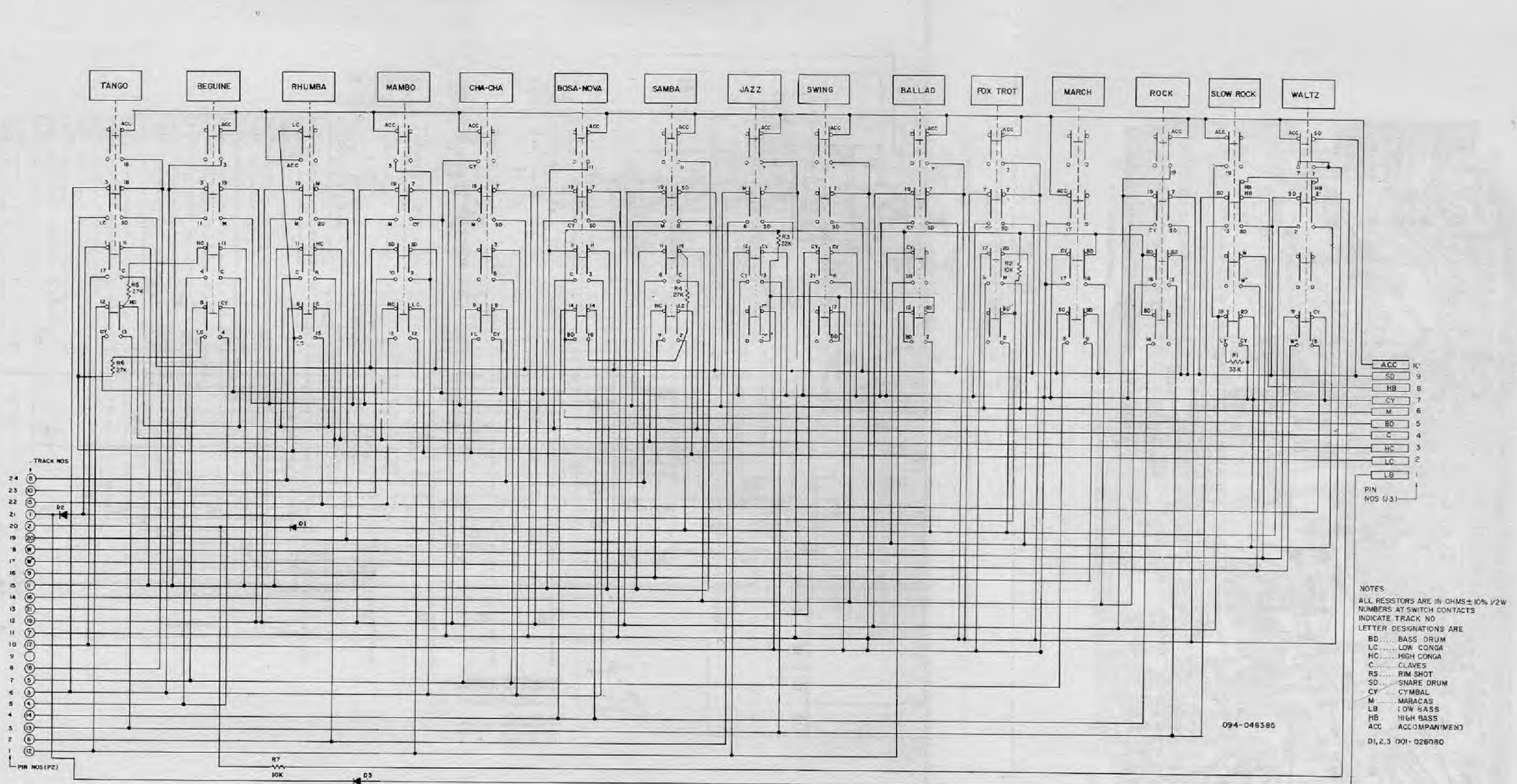


FIGURE 5-18
RHYTHM III SELECTOR SWITCH
BOARD 124-000196,
LAYOUT & SCHEMATIC

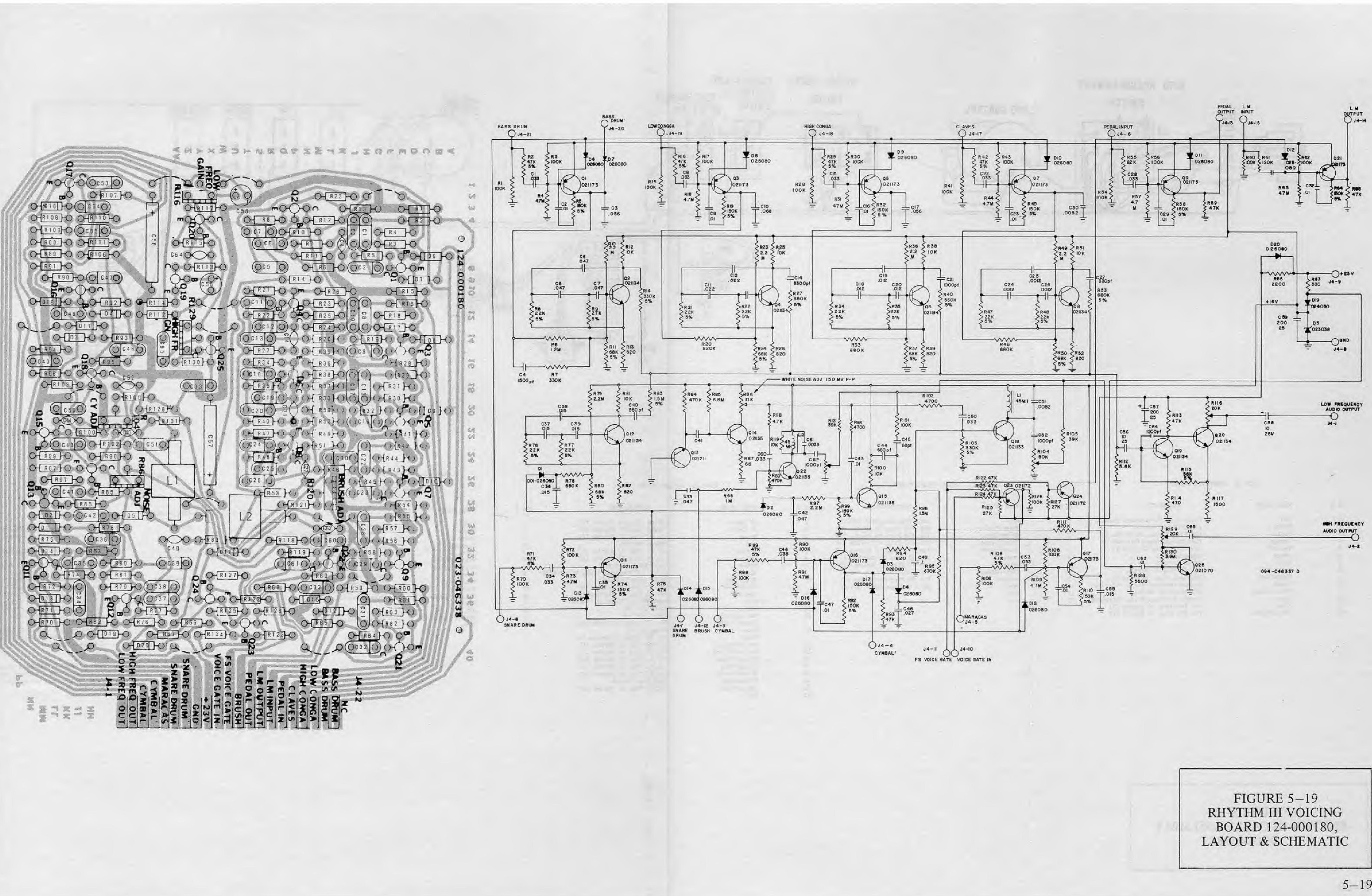
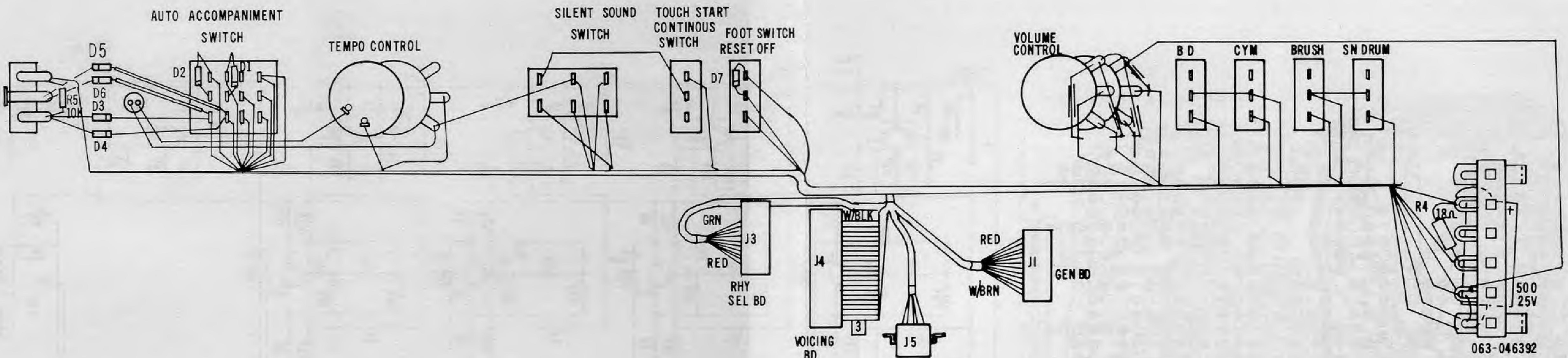


FIGURE 5-19
RHYTHM III VOICING
BOARD 124-000180,
LAYOUT & SCHEMATIC



PLUG J1 GENERATOR BOARD			PLUG J3 RHYTHM SELECTOR BOARD			PLUG J4 VOICING BOARD			PLUG J5 RHYTHM INPUT - OUTPUT			PLUG J5 RHYTHM INPUT - OUTPUT		
PIN #	WIRE COLOR	TERMINATION	PIN #	WIRE COLOR	TERMINATION	PIN #	WIRE COLOR	TERMINATION	PIN #	WIRE COLOR	TERMINATION	PIN #	WIRE COLOR	TERMINATION
1	Red	Touch Start/Continuous Switch	1	Red	Auto Accompaniment Switch	1	#3 Cable	Volume Control Rhythm III	1	Red	Terminal Strip 063-046392	1	Blue	Top of Power Supply Assembly
2	Brown	Silent/Sound Switch	2	White/Violet	Pin #10 Plug J4 Rhythm III	2	#4 Cable	Volume Control Rhythm III	2	Black	Ground of Terminal Strip 063-046392	1		
3	Violet	Pin #10 of Plug J4 Rhythm III	3	White/Blue	Pin #18 Plug J4 Rhythm III	3	Brown	Pin #7 Plug J3 Rhythm III	3	White	Foot Switch Reset/Off Switch			
4	Orange	Foot Switch Reset/Off Switch	4	White/Green	Pin #17 Plug J4 Rhythm III	4	Red	Cymbal Switch	4	Orange	+25V D.C.			
5	Yellow	Terminal Strip 063-046393	5	White/Black	Pin #21 Plug J4 Rhythm III	5	Orange	Pin #6 Plug J3 Rhythm III	5	Brown	Tone Wheel Generator Grounding			
6	Green	Tempo Control	6	Orange	Pin #5 Plug J4 Rhythm III	6	Yellow	Pin #9 Plug J3 Rhythm III	6	White/Orange	Auto Accompaniment Switch	2	Black	
7	Gray	Tempo Control	7	Brown	Pin #3 Plug J4 Rhythm III	7	Green	Snare Drum Switch	7	White/Yellow	Pin #15 Plug J4 Rhythm III	3	Brown	
8	White/Red	Pin #9 Plug J4 Rhythm III	8	White/Orange	Auto Accompaniment Switch	8	Black	Ground of Terminal Strip 063-046392	8	Green	Pin #16 Plug J4 Rhythm III	4	Blue	
9	White/Red	Terminal Strip 063-046392	9	Yellow	Pin #6 Plug J4 Rhythm III	9	White/Red	Silent/Sound Switch	9	Blue	Auto Accompaniment Switch	5	White/Black	
10	Black	Ground Terminal Strip 063-046392	10	Gray	Pin #8 Plug J4 Rhythm III	10	White/Red	Pin #8 Plug J1 Rhythm III	10	Violet	Pin #10 Expression Pedal Plug	6	Green	
11	White/Black	Silent/Sound Switch	11	N/C	Auto Accompaniment Switch	11	White/Red	Pin #3 Plug J1 Rhythm III	11	Auto Accompaniment Switch	Pin #11 of Auto Chord Board	7	White/Brown	
12	Blue	Ground Terminal Strip 063-046392	12	N/C		12	White	Foot Switch Reset/Off Switch	12	Shield Cable #1	Pin #10 of Auto Chord Board	8	Gray	
13	White/Brown	Pin #14 Plug J4 Rhythm III	13	White/Brown	Cymbal Switch	13	White/Brown	Brush Switch	13	Clear	Pin #11 of Auto Chord Board	9	White/Orange	
14		Pin #13 Plug J4 Rhythm III	14	White/Brown	White/Brown	14	Blue	Pin #12 plug J1 Rhythm III	14	Shield Cable #2	Pin #12 of Auto Chord Board	10	Yellow	
15			15	Blue	Brush Switch	15	Blue	Brush Switch	15	Clear	Pin #13 of Auto Chord Board	11	Shield	
16			16	White/Orange	Pin #11 Plug J1 Rhythm III	16	White/Orange	Pin #11 Plug J1 Rhythm III	16		Pin #14 of Auto Chord Board	12	Clear	
17			17	White/Yellow	Pin #6 Plug J5 Rhythm III	17	White/Yellow	Pin #6 Plug J5 Rhythm III	17		Pin #15 of Auto Chord Board	13	N/C	
18			18	White/Green	Pin #7 Plug J5 Rhythm III	18	White/Green	Pin #7 Plug J5 Rhythm III	18		Pin #16 of Auto Chord Board	14	Shield	
19			19	White/Blue	Pin #4 Plug J3 Rhythm III	19	White/Blue	Pin #4 Plug J3 Rhythm III	19		Pin #17 of Auto Chord Board	15	Clear	
20			20	White/Violet	Pin #3 Plug J3 Rhythm III	20	White/Violet	Pin #3 Plug J3 Rhythm III	20		Pin #18 of Auto Chord Board			
21			21	White/Gray	Pin #2 Plug J3 Rhythm III	21	White/Gray	Bass Drum Switch	21		Pin #19 of Auto Chord Board			
22			22	White/Black	Pin #5 Plug J3 Rhythm III	22	N/C	Pin #5 Plug J3 Rhythm III	22		Pin #20 of Auto Chord Board			

FIGURE 5-20
RHYTHM III CABLE ASSEMBLY
011-046388

PATTERNS NAMES	RHYTHM VOICES ASSIGNED	TRACK NUMBERS (1-21)	BEAT / TWO MEASURES	AUTOCHORD TRACK NOS LO HI ACC
	TEMPO LAMP		1 2 3 4 1 2 3 4	
WALTZ	CY SD BD	15 2+7 (1)*	● ● ● ● ● ● ●	1 - 2+7
SLOW ROCK	CY CY SD BD	19(33K) 20 13 (1)*	● ● ● ● ● ● ● ● ●	1 13 19
SHADED AREAS ARE TIME INTERVALS SKIPPED				
ROCK	CY SD BD	19 7+13 14+16	● ● ● ● ● ● ● ● ●	1 2 19
BOSSA NOVA	CY CL SD BD BD	19 3+11 7 (1)+14 16(27K)	● ● ● ● ● ● ● ● ●	1 2 11+13
SAMBA	M CL SD HC LC BD	19 16 8+11 9 2 (1)*	● ● ● ● ● ● ● ● ●	1 2 8+11
MAMBO	M CY SD HC LC BD	19 7 3+10 15 12 (1)*	● ● ● ● ● ● ● ● ●	1 2 3+10
RHUMBA	M CL HC LC BD	19+20 11+15 6 8 (1)*	● ● ● ● ● ● ● ● ●	1 2 8
BEGUINE	M CY CL HC LC BD	19 4 11+3 4(27K) 5(27K) (1)*	● ● ● ● ● ● ● ● ●	1 2 3+11
CHA CHA	M CY SD LC BD	19 8 7 3+5 (1)*	● ● ● ● ● ● ● ● ●	1 2 8
FOX TROT	M CY SD BD	17+20 7 7 (1)+2(10K)	● ● ● ● ● ● ● ● ●	1 2 7
SWING	CY SD BD BD	16+21 7 17(22K) (1)*	● ● ● ● ● ● ● ● ●	1 2 7
MARCH	CY SD BD	17 5+9 (1)+16	● ● ● ● ● ● ● ● ●	1 2 17
BALLAD	CY SD BD	19+20 7 12+2(22K)	● ● ● ● ● ● ● ● ●	1 2 7
JAZZ	M CY SD BD	6 12+13 7 (1)+17(22K)	● ● ● ● ● ● ● ● ●	1 2 7
TANGO	CY SD CL HC LC BD	12 18 11 13 3 (1)+17(10K)	● ● ● ● ● ● ● ● ●	1 2 18

HC — HIGH CONGA
 LC — LOW CONGA
 RS — RIM SHOT
 C — CLAVES
 SD — SNARE DRUM
 M — MARACAS
 CY — CYMBAL
 BD — BASS DRUM

Small Dots indicate attenuated loudness.
 Bass Drum always connected to track 1 through 10K

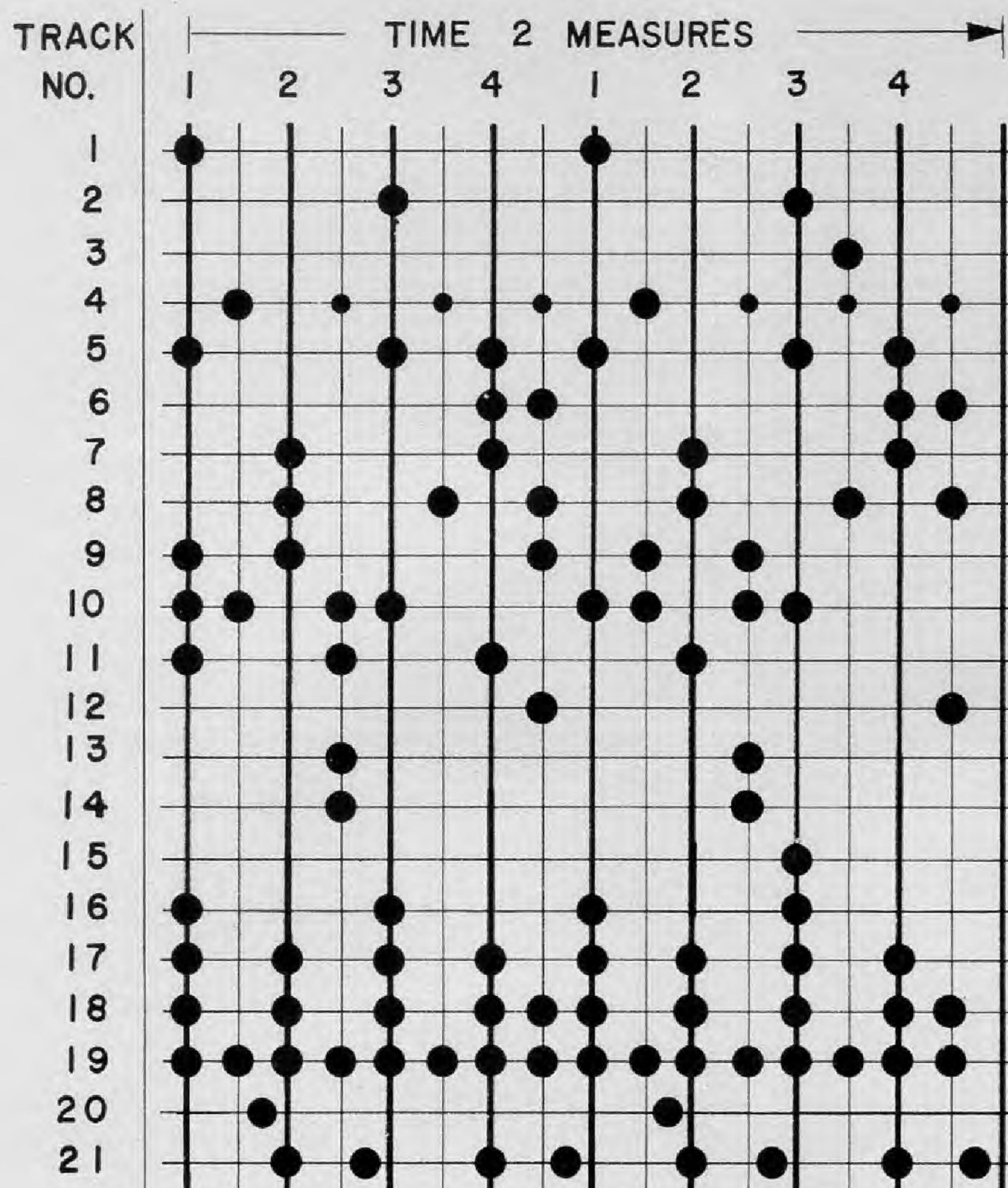


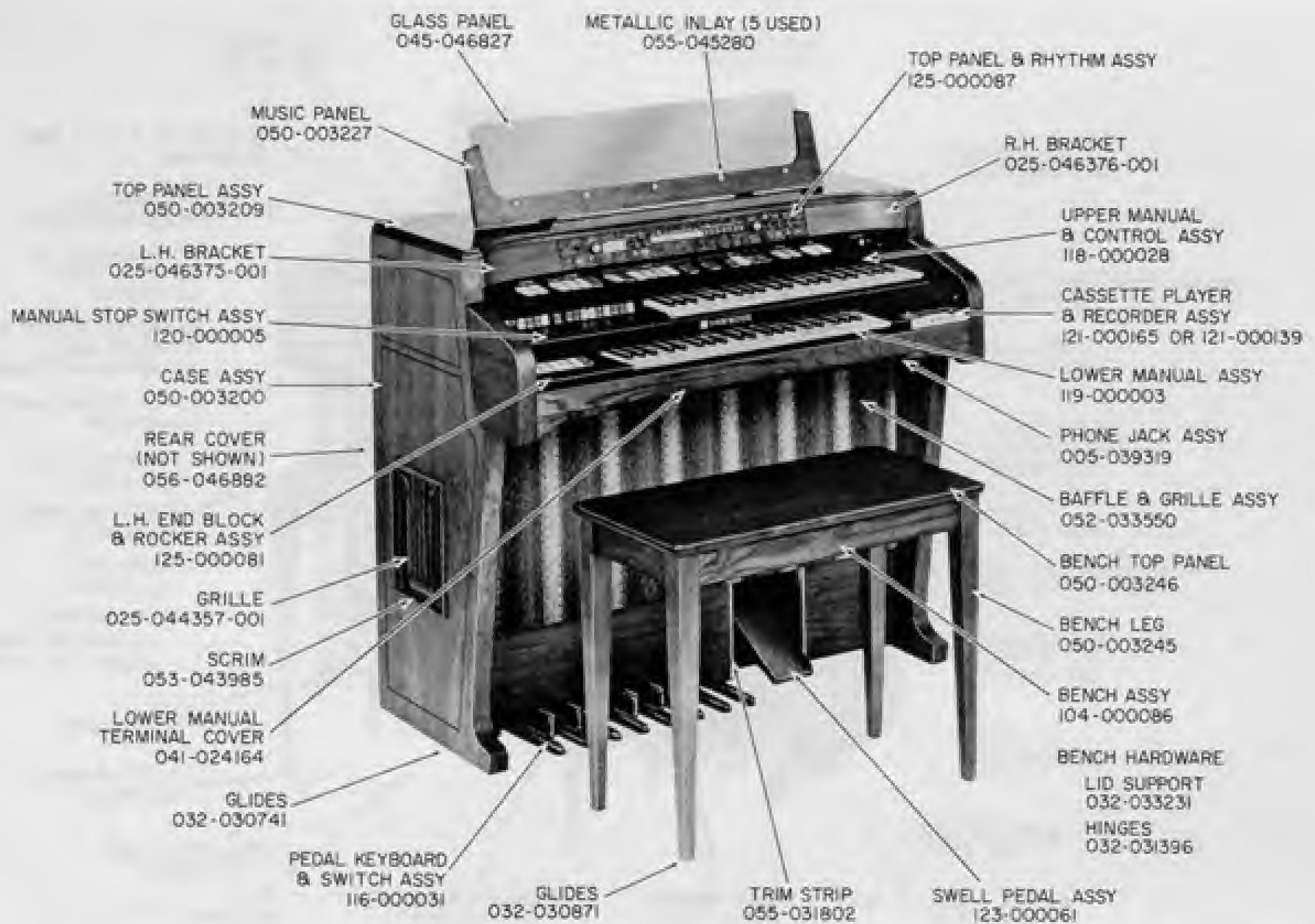
FIGURE 5-21
RHYTHM III
 OUTPUT MATRIX TIMING
 & VOICING PATTERNS CHARTS

SECTION VI PARTS LIST

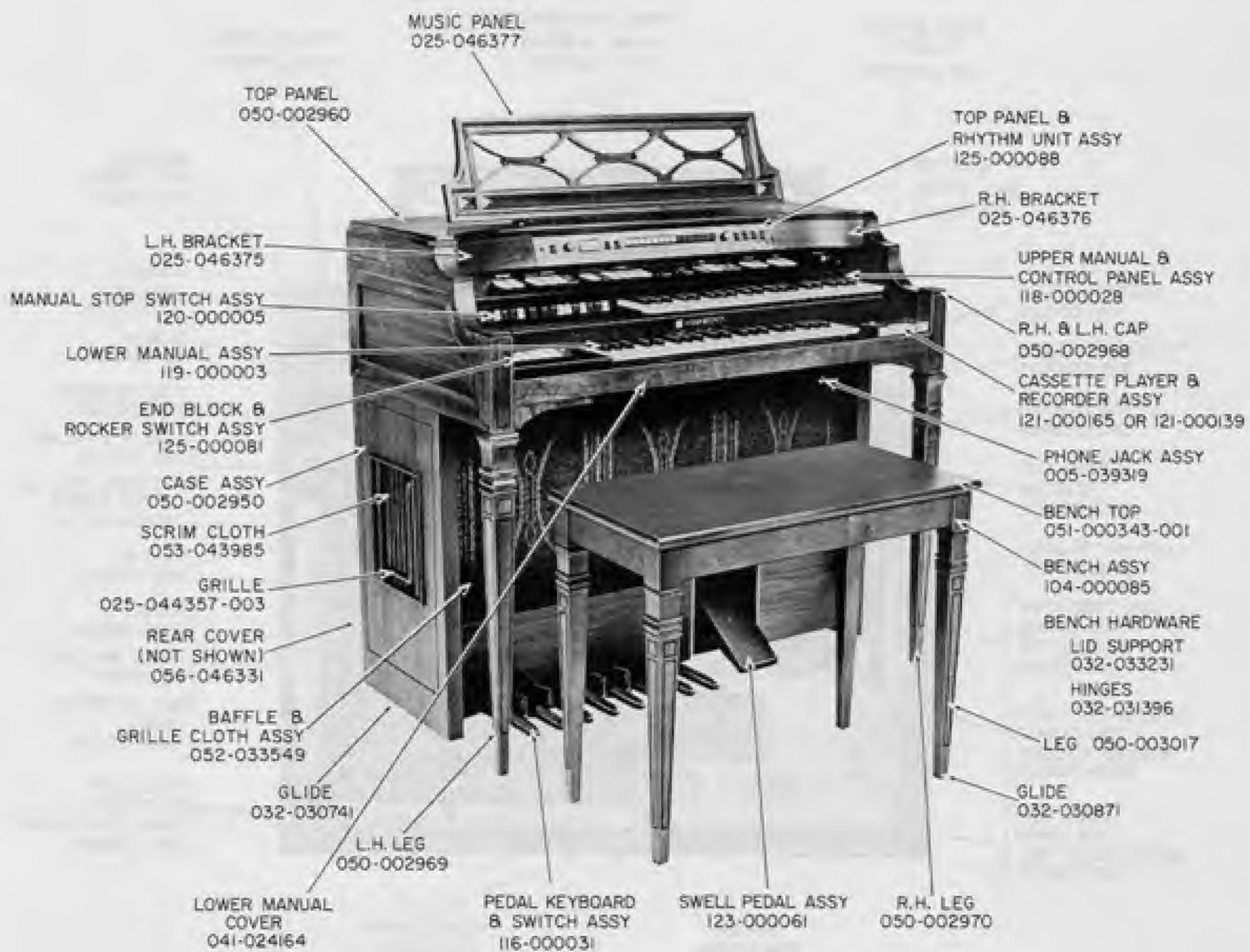
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Console (524C) Front View



Console (582C) Front View